



Air Quality Permitting Statement of Basis

August 13, 2008

Tier I Operating Permit No. T1-2008.0110

Basic American Foods, Rexburg

Facility ID No. 065-00008

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DRAFT FOR PUBLIC COMMENT

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Acronyms, Units, and Chemical Nomenclature

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
Btu	British thermal unit
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	Environmental Protection Agency
gpm	gallons per minute
HAPs	Hazardous Air Pollutants
IDAPA	A numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pound per hour
m	meter(s)
MACT	Maximum Available Control Technology
MMBtu	Million British thermal units
NESHAP	Nation Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
O ₃	ozone
PM	Particulate Matter
PM ₁₀	Particulate Matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	Permit to Construct
PTE	Potential to Emit
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	synthetic minor
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/yr	Tons per year
µg/m ³	micrograms per cubic meter
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PURPOSE

The purpose of this memorandum is to explain the legal and factual basis for this Tier I operating permit in accordance with IDAPA 58.01.01.362. The Department of Environmental Quality (DEQ) has reviewed the information provided by Basic American Foods (BAF) regarding the operation of its facility located in Rexburg.

2. FACILITY DESCRIPTION

The Basic American Foods (BAF) Rexburg facility produces a variety of dehydrated food products for both internal use and for external customers. Products include potato granules, formulated dehydrated food products, dehydrated whole and piece food products, and animal feed. BAF uses a variety of dehydration technologies to produce products to meet exacting customer specifications. The main sources of air emissions include boilers, dryers, dehydration lines, pneumatic material transfer and packaging operations.

3. FACILITY/AREA CLASSIFICATION

This facility is a major facility as defined by IDAPA 58.01.01.008.10 because it emits or has the potential to emit a regulated air pollutant(s) in amounts greater than or equal to major facility threshold(s) listed in Subsection 008.10. The AIRS classification is “A.”

The Rexburg facility is not a major facility for purposes of the PSD/NSR program as defined under IDAPA 58.01.01.205.01 (40 CFR 52.21(b)(1)) because it does not have the potential to emit a regulated criteria air pollutant in amounts greater than or equal to 250 tons per year. The facility is not a “designated facility” according to the definitions in IDAPA 58.01.01.006.30. The Rexburg facility does contain fossil-fuel boilers, but the total potential fossil-fuel Btu input is less than 250 MMBtu per hour. The two natural gas boilers have a total Btu input of 87 MMBtu/hr and the Kipper boiler is allowed to burn up to 50% heat input on coal, which is 45 MMBtu per hour, for a total fossil-fuel input of 132 MMBtu/hr. Facility-wide CO emissions are limited to 249 tons per year.

The facility is located within AQCR 61, UTM zone 12 and Madison County. The area is designated as attainment or unclassifiable for PM₁₀, PM_{2.5}, CO, NO₂, SO_x, and Ozone. Reference 40 CFR 81.313.

The SIC is 2034, which represents establishments primarily engaged in artificially dehydrating fruits and vegetables, including “potato flakes, granules, and other dehydrated potato products.”

4. APPLICATION SCOPE

Basic American Foods (BAF) is requesting a modification to permits T2-030515 and T1-2008.0053 to revise the pressure drop range for the Kipper boiler multiclone. BAF has requested that the upper end of the multiclone pressure drop range in the permit be increased by one inch of water.

BAF will be refurbishing the multiclone during July 2008 which will include replacing both tube sheets, outlet tubes, vanes, collecting tubes, and gaskets. BAF’s multiclone originally came with Spirocones, which are energy saving devices that reduce the pressure drop across the multiclones without affecting the particulate capture efficiency. The manufacturer no longer makes Spirocones for the 12V size multiclones, which BAF has, due to a variety of issues. See the application materials and the letter from Mr. Stephen Chiama of Babcock and Wilcox Power Generation Group. Mr. Chiama recommends the

Spirocones are left out of the multiclone during the refurbishing process. This will have the effect of increasing the pressure drop across the multiclones by approximately one inch of water column with no loss of particle removal efficiency.

Mr. Chiama states:

In the specific case involving the Basic American Foods installation at Rexburg, ID; the multiclone provided with Joy Job No. 81-120-06 was sized for 48,314 ACFM at 435°F. For this installation in new condition, we originally predicted a pressure drop of 1.85" VWC (vertical water column) with Spirocones installed. For the same design conditions, in as-new condition without Spirocones, we would predict that model and size multiclone to have pressure drop approximately 1" VWC higher than with Spirocones installed.

Operating the unit without Spirocones should not reduce the collection efficiency of the multiclone dust collector significantly enough to measure in practical situations.

In addition, BAF has requested some amendments to the permit that were identified during the permit handoff meeting held on July 31, 2008. A letter with requested amendments was received August 12, 2008. The amendments include:

- Clarifying in Permit Conditions 5.7, 5.8, and 6.7 that performance tests are required to be conducted within 180 days of June 10, 2008 (rather than within 180 days of permit issuance, since the permit is being modified).
- Clarifying in Permit Condition 8.2 that CO emissions calculations are "...based on steam production and coal consumption..." It appears the word "production" was omitted from the sentence in the previous permit.
- Changing the CO emissions reporting schedule in Permit Condition 8.4.1 from July 1st through June 30th to January 1st through December 31st.
- Changing the annual compliance certification reporting period and semiannual monitoring reporting period to also be based on a calendar year (January 1st through December 31st).

5. SUMMARY OF EVENTS

July 8, 2008	Application received at DEQ.
July 18, 2008	DEQ determined the application complete.
August 12, 2008	DEQ received a letter from BAF requesting additional amendments.

5.1 *Permitting History*

July 30, 1980	PTC Letter (no number assigned) for the Kipper boiler issued, Permit status (S)
April 30, 1981	PTC Letter was amended to revise test dates, Permit status (S)
May 8, 1984	PTC Letter was amended to clarify coal/wood input limits, Permit status (S)
December 11, 2002	Initial Tier I Operating Permit No. 065-00008 issued, Permit status (S)
April 16, 2008	T1-060513, Tier I Operating Permit Renewal, Permit status (S)
June 10, 2008	T2-030515, Facility-wide Tier Operating Permit and Permit to Construct, Permit status (A)
June 10, 2008	T1-2008.0053, Tier I Operating Permit Modification – Incorporate Tier II Operating Permit No. T2-030515, Permit status (A)

6. PERMIT ANALYSIS

6.1 *Basis of Analysis*

The following documents were relied upon in preparing this memorandum and the Tier I operating permit:

- Tier I Operating Permit No. T1-2008.0053, issued June 10, 2008
- Tier I Operating Permit application received July 8, 2008

6.2 *Emissions Description and Emissions Inventory*

The emissions units and emissions inventory is not changing as a result of this modification. For a current description and inventory see the statements of basis for T2-030515.

7. REGULATORY ANALYSIS

7.1 *IDAPA 58.01.01.382 – Significant Permit Modification*

This permitting action is a significant permit modification because BAF is requesting a change to the multicclone pressure drop range to avoid violating an existing Tier I permit condition. Significant permit modifications are subject to the requirements of IDAPA 58.01.01.322, regarding the contents of Tier I operating permits.

7.2 *New Source Performance Standards (NSPS) – 40 CFR 60*

No New Source Performance Standards apply to any of the emissions units at the Rexburg facility. The Kipper boiler and boilers no. 1 and no. 2 were constructed prior to the Subpart Dc applicability date of June 9, 1989.

7.3 *National Emission Standards for Hazardous Air Pollutants (NESHAPS) – 40 CFR Parts 61 & 63*

No MACT or NESHAP rules apply because the Rexburg Plant is not a major source of Hazardous Air Pollutant emissions and is not in one of the applicable source categories.

8. PERMIT CONDITIONS

This section describes only the changes made to the permit as a result of this permitting action. Existing permit conditions are identified as “Existing Permit Conditions”, and revised permit conditions are identified as “Revised Permit Conditions.”

8.1 *Kipper Boiler*

The Kipper boiler is a wood and coal-fired boiler with a maximum steam production rate of 65,000 pounds per hour. The Kipper boiler was installed in 1981 and an economizer was added in 2001. Particulate matter emissions are controlled by a multicclone and wet scrubber.

8.2 *Existing Permit Condition 3.13*

Existing Permit Condition 3.13 contains the approved CAM monitoring in Table 3.3. The existing multicclone pressure drop range (Indicator No. 2) is contained within the table and states, “An excursion is defined as a multicclone pressure drop less than 1.0 inches of water or greater than 5.0 inches of water.”

8.3 Revised Permit Condition 3.13

In revised Permit Condition 3.13, the multicclone pressure drop indicator range was changed to “An excursion is defined as a multicclone pressure drop less than 1.0 inches of water or greater than 6.0 inches of water.”

8.4 Permit Amendments

In addition, BAF requested some amendments to the permit that were identified during the permit handoff meeting held on July 31, 2008. A letter with requested amendments was received August 12, 2008. The amendments include:

- Clarifying in Permit Conditions 5.7, 5.8, and 6.7 that performance tests are required to be conducted within 180 days of June 10, 2008 (rather than within 180 days of permit issuance, since the permit is being modified).
- Clarifying in Permit Condition 8.2 that CO emissions calculations are “...based on steam production and coal consumption...” It appears the word “production” was omitted from the sentence in the previous permit.
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9. INSIGNIFICANT ACTIVITIES

The insignificant activities list did not change.

10. ALTERNATIVE OPERATING SCENARIOS

The facility did not request any alternative operating scenarios.

11. TRADING SCENARIOS

The facility did not request any trading scenarios.

12. COMPLIANCE SCHEDULE

12.1 Compliance Plan

With issuance of Tier I Operating Permit No. T1-2008.0053, which incorporates the requirements of facility-wide Tier II Operating Permit and Permit to Construct No. T2-030515, the total compliance plan was satisfied and was removed from the permit.

12.2 Compliance Certification

Basic American Foods-Rexburg is required to periodically certify compliance in accordance with General Provision 21. The facility shall submit an annual compliance certification for each emissions unit to DEQ and EPA, in accordance with IDAPA 58.01.01.322.11. The compliance certification report shall address the compliance status of each emissions unit with the terms and conditions of this permit.

13. PERMIT REVIEW

13.1 Regional Review of Draft Permit

A draft Tier I permit was not provided to the Idaho Falls Regional Office because the permitting action did not involve any new requirements.

13.2 Facility Review of Draft Permit

A draft Tier I permit was not provided to Basic American Foods because the permitting action involved only minor changes that BAF requested.

13.3 Public Comment

DEQ is providing the draft permit for public comment.

14. ACID RAIN PERMIT

This facility is not an affected facility as defined in 40 CFR 72 through 75; therefore, acid rain permit requirements do not apply. The facility is not an affected unit according to the definitions and applicability under 72.2 and 72.6. The BAF Rexburg facility is a non-utility unit (72.6(b)(8)). "Unit" is defined as a fossil fuel-burning device and "utility" is defined as any facility that sells electricity.

15. REGISTRATION FEES

This facility is a major facility as defined by IDAPA 58.01.01.008.10; therefore, registration and registration fees in accordance with IDAPA 58.01.01.387 apply. The facility is in compliance with registration and registration fee requirements.

ZK/hp Permit No. T1-2008.0110

Appendix A – AIRS Data Entry Form

AIRS/AFS^a FACILITY-WIDE CLASSIFICATION^b DATA ENTRY FORM

Facility Name: Basic American Foods
Facility Location: Rexburg
AIRS Number: 065-00008

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO ₂	A	B					A	U
No _x	A	B					A	U
CO	A	SM					A	U
PM ₁₀	A	B					A	U
PT (Particulate)	A	B						U
VOC	B	B					B	U
THAP (Total HAPs)	B	ND					B	U
			APPLICABLE SUBPART					

^a Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

^b AIRS/AFS Classification Codes:

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, or each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).